Strategies for improving patient safety culture or climate in hospitals: A systematic review

Renata Morello, Judy Lowthian, Anna Barker, Rosemary McGinnes, David Dunt, Caroline Brand
Background

• Threats to patient safety are:
  – Common
  – Costly
  – A burden to the healthcare system

• Improving patient safety within hospitals remains a challenge
Why is patient safety hard to achieve?

• Healthcare organisations are:
  – Complex and multi-faceted
  – Dynamic and ever changing
  – Involve multiple systems and processes
  – Compounded by human factors
  – Have a local and underlying culture
Patient Safety Culture

• Patient safety culture has been identified as an important factor to optimising patient safety

• There is a current focus on measuring and improving patient safety culture and climate to improve patient safety
What is Patient Safety Culture?

Organisational culture
- Beliefs, attitudes, values and perceptions of employees in relation to their organisation’s performance

Patient safety culture
- Beliefs, attitudes, perceptions, competencies and the patterns of behaviour that determine the commitment to safety management

Patient safety climate
- Shared day-to-day perceptions of an organisation’s practices and policies

Unit systems and processes
- Employee practices and behaviours

PATIENT SAFETY

Patient safety climate

“It is difficult to speak up if I perceive a problem with patient care” (SAQ)

“Patient safety is constantly reinforced as the priority in this clinical area” (SAQ)
Does positive patient safety culture = patient safety?

• Patient safety climate reported to be associated with:
  – Clinician behaviours such as error reporting
    » Braithwaite et al 2010
  – Reductions in adverse events
    » Singer 2009 et al, Mardon et al 2010
  – Reduced mortality
    » Sexton 2002
Can patient safety culture be improved?

Hospitals are currently implementing patient safety culture strategies.

→ Do we have the evidence to support effectiveness?

Strategies for improving patient safety culture in hospitals: a systematic review

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ABSTRACT
Purpose: To determine the effectiveness of patient safety culture strategies in hospitals.

The increasing number of literature reports on patient safety culture performance²⁻¹³ highlights the importance of evaluating the impact of these strategies on patient outcomes.
Aims and Objectives

To critically assess the evidence for the effectiveness of strategies for improving patient safety culture in hospitals

OBJECTIVES

• What strategies are being used?
• Do they work?
• Are they transferable to other settings?
Inclusion criteria

Publication
January 1996 – April 2011

Study population
Hospitals or hospital units

Intervention
Any hospital or unit-based strategy implemented with the primary aim of enhancing patient safety culture

Study design
Randomised controlled trials (RCTs), non-RCTs, controlled before and after studies, interrupted time series and historically controlled studies
Included studies

- 21 studies (22 publications)
  - 1 cluster randomised control trial
  - 7 controlled before and after studies
  - 13 historically controlled (before and after) studies
Patient safety climate tools

- Safety Attitudes Question (SAQ)
- Safety Climate Survey (SCSu)
- Patient Safety Cultures in Healthcare Organizations (PSCHO)
- Hospital Survey on Patient Safety Culture (HSOPS)
- NHS National Staff Survey
Patient safety climate interventions

- Leadership walk rounds
- Structured educational programs
- Team based strategies
- Simulation-based training programs
- Multi-faceted unit-based programs
- Multi-component organisational intervention
What did we find?

• Limited evidence to support effectiveness of strategies to change patient safety culture

→ Studies found to have isolated or limited effects from strategies tested
What did we find?

• Some evidence to support
  – Leadership walk rounds
  – Multi-faceted unit based programs
Leadership walk rounds

• One cluster RCT
  – A small positive effect on patient safety climate for nurses participating in leadership walk rounds
    » Thomas et al 2005

• Historically controlled study
  – A relative increase in mean safety climate scores 18 months following implementation
    » Frankel et al 2008
Multi-factorial unit based programs

• Controlled before and after study
  – Positive effect on safety climate scores
    » Pronovost et al 2005

• Six historically controlled studies:
  – Supported these positive findings
  – With all studies reported varying levels of improvements in at least one dimension of patient safety climate over time.
Limitations of the current evidence base

• Limited number of studies
• Intervention variability
• Implementation effectiveness of strategies is unclear
• Culture responsiveness within study time
Limitations of the evidence

• Over 60% of studies relied on historically controlled study designs, often in single organisations

→ Poor internal validity:
  – Small sample size
  – High risk of bias: selection / measurement
  – Limited follow-up response rates
Reflections

- Was it implementation failure that led to the limited impact on patient safety culture?
- Do safety culture strategies need to be more appropriately target?
- What is the required frequency, intensity and follow up of interventions?
Reflections

- Are we measuring what we think we are measuring?

- Are current tools sensitive enough to examine change in patient safety climate?

- Does change in patient safety climate = change in patient outcomes?
• Low-quality, heterogeneous evidence primarily from pre–post evaluations suggests:
  – Bundled, multicomponent interventions can improve clinician and staff perceptions of safety culture
  – Multifaceted interventions can improve care processes and patient outcomes
Where to from here?
Where to from here?

• Hospitals are advised to implement strategies for improving patient safety culture with caution
  – Within a robust evaluation design

• Further research in the area of patient safety culture/climate using more rigorous evaluation designs

• Examination of more downstream outcomes
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